National Aeronautics and
Space Administration
Goddard Space Flight Center
Greenbelt, MD 20771

August 24, 2004

Reply to Attn of: 410

TO: NASA Headquarters
Associate Administrator for Science

FROM: 100/Director

SUBJECT: Initial Confirmation Readiness Review (ICRR) Findings for the Wide-Field Infrared Survey Explorer (WISE)

The Goddard Program Management Council (GPMC), chaired by the Director of Systems Safety and Mission Assurance, Wentworth Denoon, conducted the Initial Confirmation Readiness Review (ICRR) on July 26, 2004. The review included a science overview, mission and programmatic overview, JPL's assessment based on their PMC review on July 19, 2004, a Technical, Management and Cost (TMC) independent report and the Explorer Program Office assessment and recommendations.

Based upon the findings of the review process, Goddard Space Flight Center recommends confirmation of the WISE mission to Phase B for the following reasons: the Principal Investigator has assembled a strong, capable team and demonstrated during the descope effort that the baseline science could still be met; the management team led by JPL has resolved the technical and programmatic weaknesses identified during the Step 2 selection process; and the mission was determined to have adequate schedule and sufficient dollar reserves to meet the June 2008 launch date. The WISE team, during the extended Phase A, lowered the overall risk of the mission from a TMC rating of medium to high for both technical and cost to a low risk for technical implementation and low medium for cost. Of particular concern resulting from the TMC analysis is the cost estimate for the space craft development. As you know, during Phase B, GSFC will do an independent analysis for the cost of the entire mission. We will give special emphasis to this element of the mission.

During Phase B, the GPMC recommends that the WISE mission work with NASA Headquarters to fully define the new minimum science requirements and to identify any associated descopes necessary to preserve an adequate level of reserves.

The GPMC also recommends conducting an in-depth configuration management review at the hardware producing facilities to determine the final as-built configuration of the heritage hardware. GSFC's experience on Astro-E2 XRS-2 showed the value of doing such a heritage review to determine the amount of work needed to establish the baseline design and to avoid test surprises that are particularly expensive for cryogenic systems.

The launch vehicle question (Delta or Taurus) should be resolved during, or soon after, confirmation to minimize the impact of any design changes. The other launch related issue is the possibility of co-manifesting WISE. Recent history has shown that the cost savings from co-manifesting are seldom achieved since a slip in either payload requires the marching army of the other to be maintained. The GPMC suggests that the programmatic risks associated with co-manifesting be fully considered.

In light of the above, the Goddard Space Flight Center considers the WISE mission to represent a low to medium risk and recommends that it be confirmed to Phase B. We have confidence that the cost can be adequately definitized and the cost risk clearly assessed prior to Phase C/D confirmation.

Edward J. Weiler

cc:
100/W. Townsend
400/D. Perkins
410/A. Comberiate
410/T. Gehringer